ABSTRACT

A state decision subsystem (SDS) including an inload module, a simple programmable entity (SPE), at least one SPE memory, an unload module, and a coherency module. The inload module reads state information from a memory subsystem — the state information corresponding to TCP packets that are to be processed. In addition, the inload module writes contexts to the SPE memory. Each context includes both a TCP packet and its corresponding state information. The SPE reads each context from the SPE memory, processes the context, and writes the processed context to the SPE memory. The processed context includes both a processed TCP packet and its corresponding processed state information. Furthermore, the unload memory reads the processed context and writes the processed state information to the memory subsystem. Finally, the coherency module compares contents of the inload module and the unload module, and if the contents of each correspond to the same TCP connection, the coherency module replaces the state related content of the inload module with the state related content of the unload module.